

100

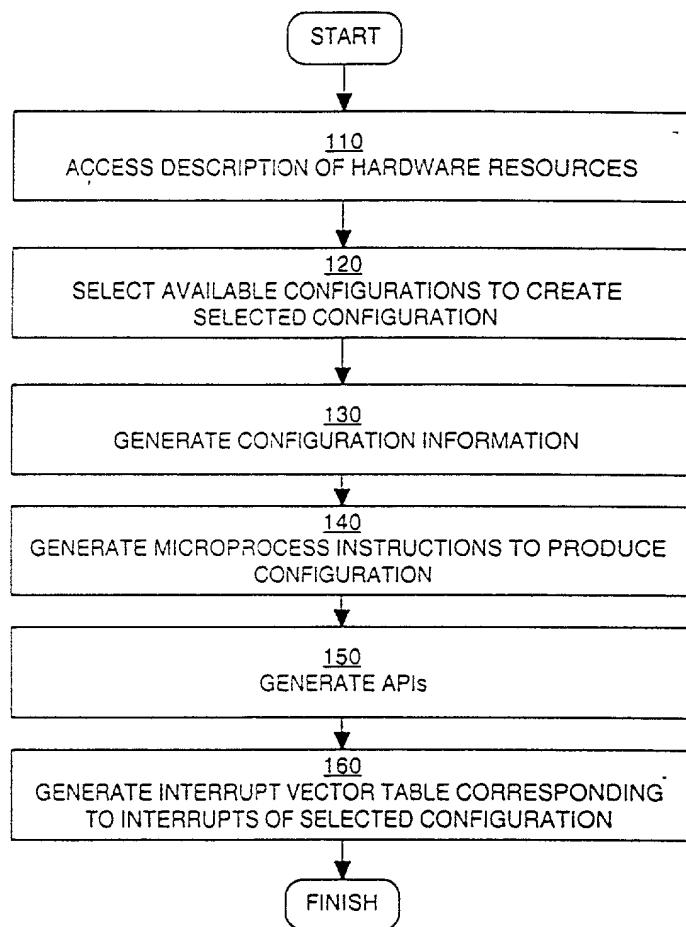


Figure 1

600

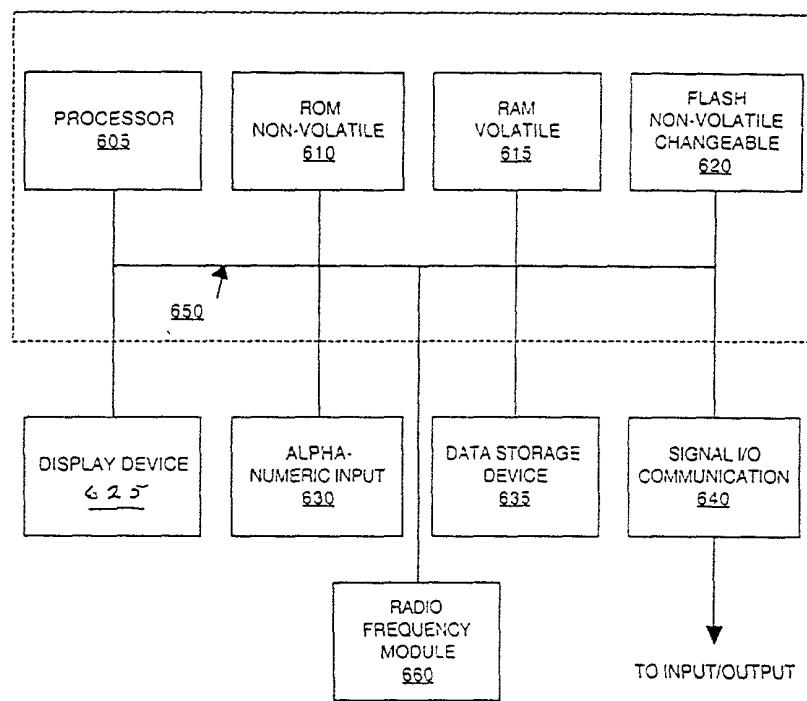


Figure 2

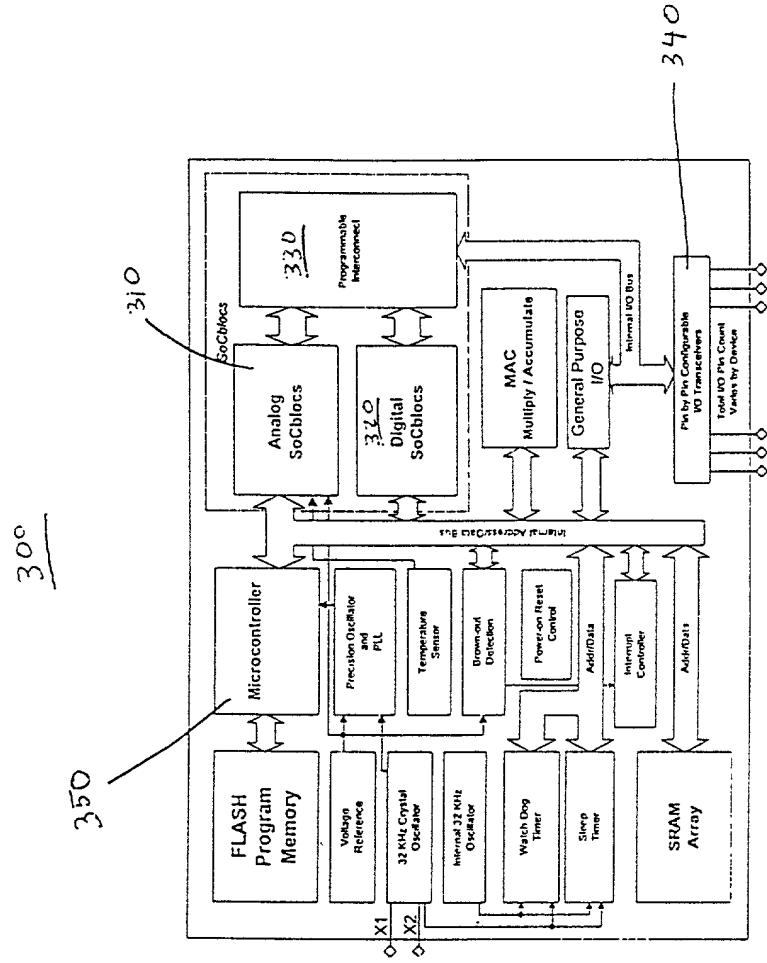
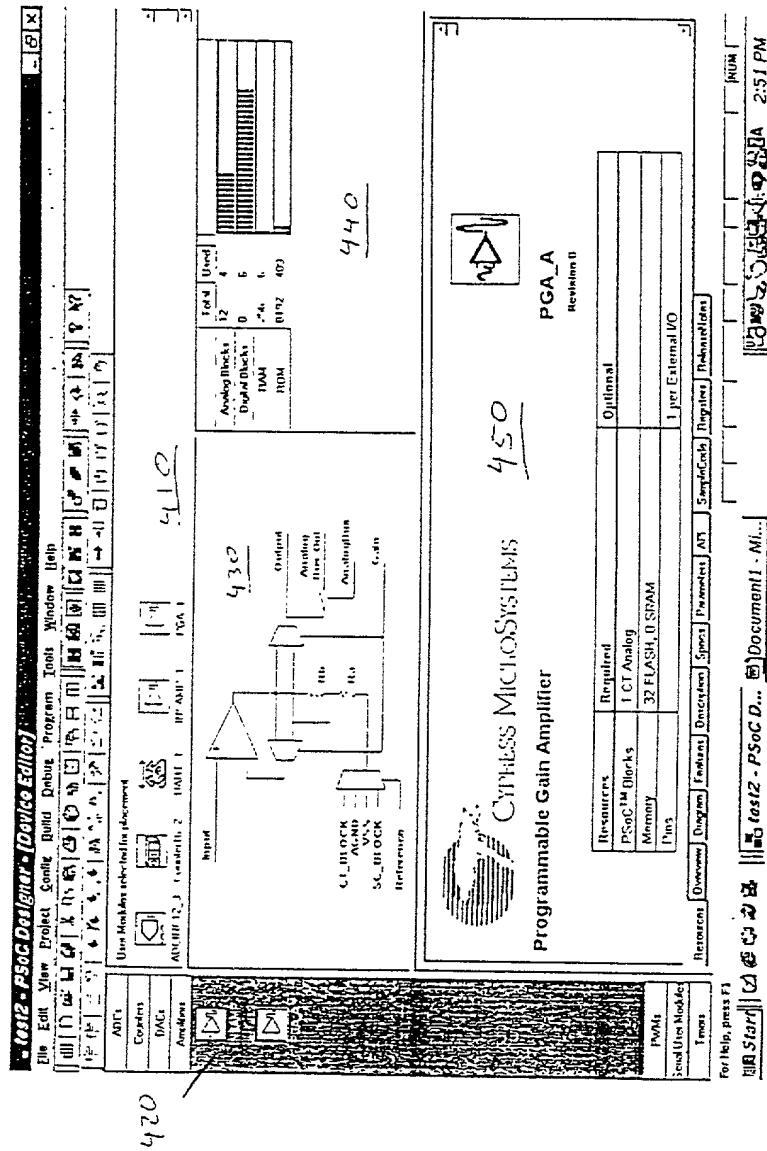
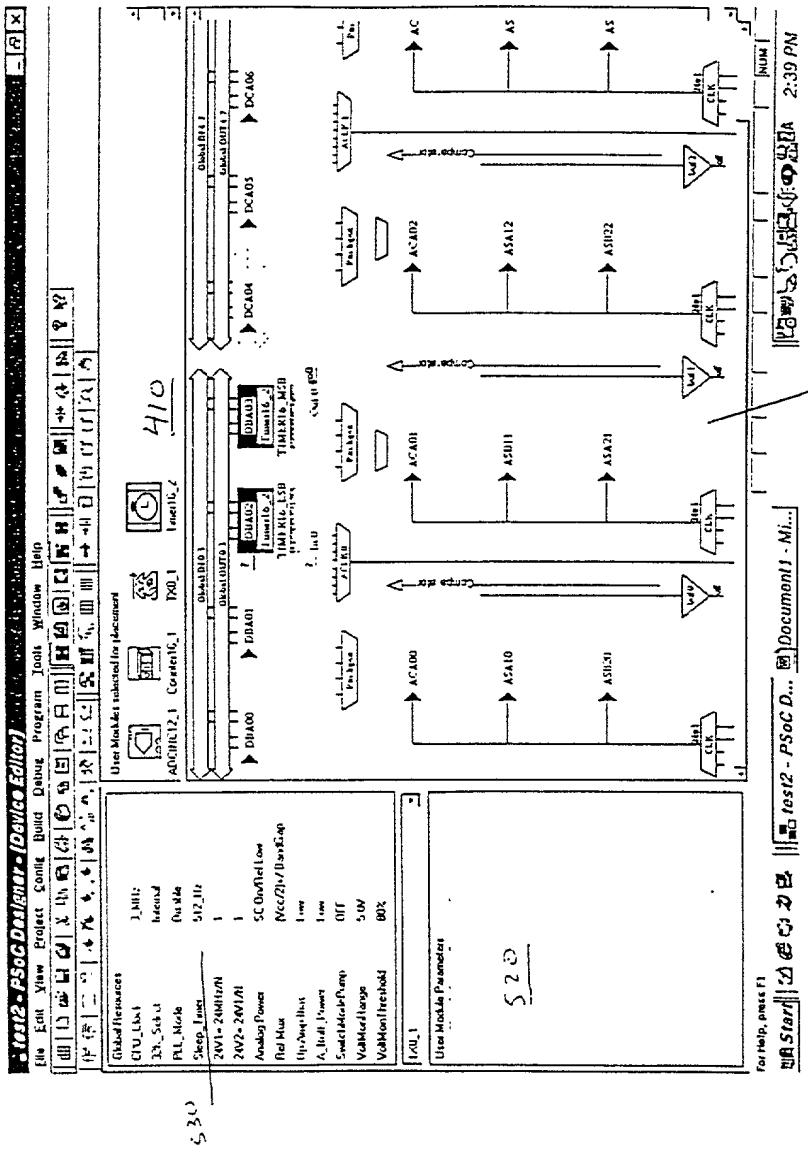


Figure 3

400



500

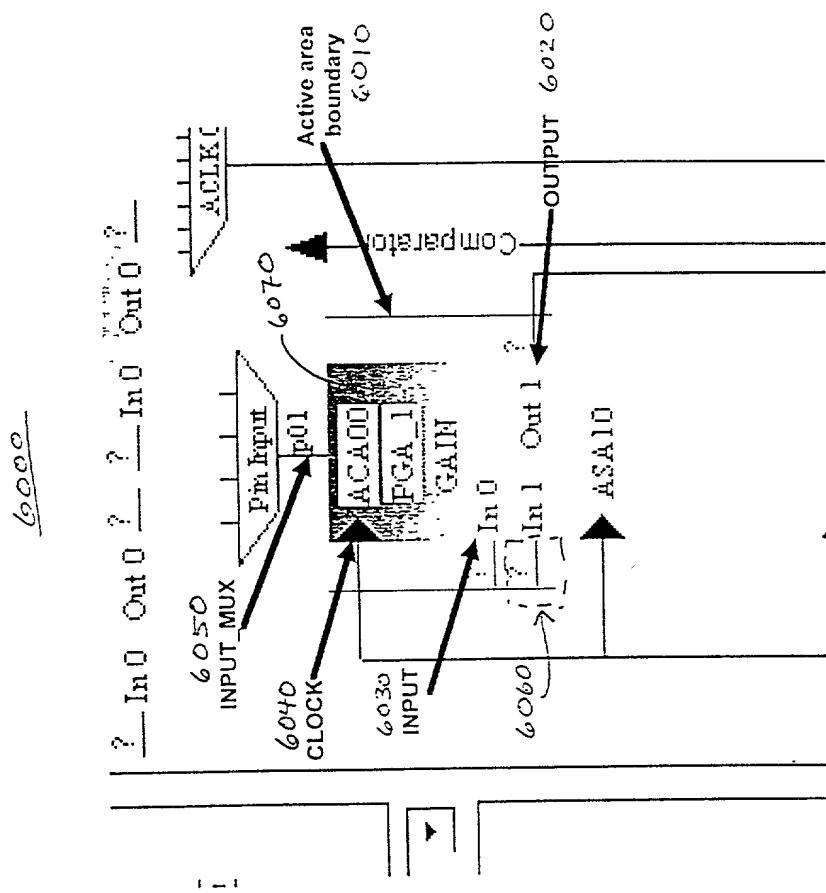


5-15

FIGURE 5

For help, press F1

Figure 6



700

```

<!--Project DB Ver 0.03 08/10/00-->
7-02 - <SOC_DEVICE DB>
7-04 - <USER_MODULE_LIST>
    <!--Variable Resolution Incremental ADC-->
7-05 - <USER_MODULE NAME="ADC_XI" TYPE="PSOC_ADC" ICON="ADC.ico" MLETAFILE="ADC.ctl">
    API_PATH_TYPE="CUSTOM">
    +> 7 - <BLOCK_LIST>
        7-06 - <SHAPE SHAPE_TYPE="BLOCKLIST">
        7-07 - <BLOCK NAME="ADC" TYPE="ANALOG_SC">
        7-08 - <REGISTER_LIST>
            7-09 - <REGISTER NAME="CRO">
            7-10 - <BITFIELD_LIST>
                7-11 - <BITFIELD NAME="OSZ" VALUE="OSZ_32"/>
                7-12 - <BITFIELD NAME="CLOCK_PHASE" VALUE="PHASE_NORM"/>
                7-13 - <BITFIELD NAME="SIGN" VALUE="POS"/>
                7-14 - <BITFIELD NAME="CAP_SIZE" VALUE="16"/>
            <BITFIELD_LIST>
        <REGISTER_LIST>
    <REGISTER NAME="CR1">
        <BITFIELD_LIST>
            7-15 - <BITFIELD NAME="COMP_OUT" VALUE="0"/>
        <BITFIELD_LIST>
    <REGISTER_LIST>
    <REGISTER NAME="CR2">
        <BITFIELD_LIST>
            <BITFIELD NAME="A_OUT" VALUE="DISABLED"/>
            <BITFIELD NAME="COMP_OUT" VALUE="ENABLED"/>
            <BITFIELD NAME="AZ_PHASE" VALUE="AZ_PH1"/>

```

Figure 1A

```

<BITFIELD NAME="CAP_SIZE" VALUE="0"/>
</BITFIELD_LIST>
<REGISTER NAME="CR3">
<BITFIELD_LIST>
<BITFIELD NAME="REF_SELECT" VALUE="COMP"/>
<BITFIELD NAME="TB_CAP_SELECT" VALUE="P112_AZ_ENABLE"/>
<BITFIELD NAME="TB_CAP_GND" VALUE="GND_P11"/>
<BITFIELD NAME="SCA_INPUT_MUX_B" VALUE="IN2B"/>
<BITFIELD NAME="SCB_INPUT_MUX_B" VALUE="IN2B"/>
<BITFIELD NAME="SRB" VALUE="DISABLE"/>
<BITFIELD NAME="PWR_SELECT" VALUE="PWR_O1"/>
</BITFIELD_LIST>
</REGISTER>
<REGISTER_LIST>
<BLOCK>
<BLOCK_LIST>
<BLOCK NAME="TMR" TYPE="DIGITAL" INTERRUPT_SOURCE="TMR_INP" INTERRUPT_TYPE="JUMP">
<REGISTER_LIST>
<REGISTER NAME="DIG_BasicFunction">
<BITFIELD_LIST>
<BITFIELD NAME="End" VALUE="1End"/>
<BITFIELD NAME="CompareType" VALUE="LToRQ"/>
<BITFIELD NAME="InterruptType" VALUE="TerminalCount"/>
<BITFIELD NAME="Function" VALUE="1Int"/>
</REGISTER>
<REGISTER NAME="DIG_Input">
<BITFIELD NAME="DataSelect" VALUE="High"/>
</BITFIELD_LIST>
</REGISTER>
</REGISTER_LIST>

```

Figure 23

```

<REGISTER NAME="DIG_Output">
  <BITFIELD_LIST>
    <BITFIELD NAME="AUXOutputEnable" VALUI="DISABLE"/>
    <BITFIELD NAME="DigOutputEnable" VALUI="DISABLE"/>
  <BITFIELD_LIST>
<REGISTERs>
  <REGISTER_LIST>
    <INPUT_LIST>/>
  <BLOCK_LIST>
    <BLOCK_LIST>
      <BLOCK NAME="CNT_LSB" TYPE="DIGITAL">
        <REGISTER_LIST>
          <REGISTER NAME="DIG_BasicFunction">
            <BITFIELD_LIST>
              <BITFIELD NAME="Function" VALUI="Counter"/>
              <BITFIELD NAME="CompareType" VALUI="LToEQ"/>
            <BITFIELD_LIST>
          <REGISTER>
            <REGISTER_LIST>
              <INPUT_SOURCE="AnalogOut" TYPE="RESERVED_RESOURCE" REGISTER_NAME="DIG_Input"
                BITFIELD="DataSelect"/>
            <INPUT_LIST>/>
          <BLOCK>
            <BLOCK NAME="CNT_MSB" TYPE="DIGITAL" INTERRUPT_SOURCE="CNT_INT" INTERRUPT_TYPE="JUMP">
              <REGISTER_LIST>
                <REGISTER NAME="DIG_BasicFunction">
                  <BITFIELD_LIST>
                    <BITFIELD NAME="Function" VALUI="Counter"/>
                    <BITFIELD NAME="End" VALUI="isEnd"/>
                    <BITFIELD NAME="CompareType" VALUI="LToEQ"/>
                  <BITFIELD_LIST>
                <REGISTER>

```

Figure 7C

```

</REGISTER_LIST>
<INPUT_LIST>
<INPUT SOURCE="CNT_LSB" TYPE="BLOCK" REGISTER_NAME="DIG_Input" BITFIELD="DataSelect"/>
</INPUT_LIST>
<BLOCK_LIST>
<BLOCK>
<BLOCK_LIST>
7 2 5< RESOURCE_LIST>
<RESOURCE NAME="AnalogOut" TYPE="ANALOG_COMPARATOR_OUTPUT">
7 3 0 < INPUT_SOURCE="ADC" TYPE="BLOCK" />
<INPUT_LIST>
<RESOURCE_LIST>
<RESOURCE>
<RESOURCE_LIST>
</SHAPE>
<PARAMETER_LIST>
<PARAMETER NAME="ADCINPUT_SCB" TYPE="INPUT" SOURCE="ADC" REGISTER_NAME="CR1">
BITFIELD="SCH_INPUT_MUX_A">
<PARAMETER NAME="ADCINPUT_SCA" TYPE="INPUT" SOURCE="ADC" REGISTER_NAME="CR1">
BITFIELD="SCA_INPUT_MUX_A_C">
<PARAMETER NAME="ClockPhase" TYPE="BLOCK" SOURCE="ADC" REGISTER_NAME="CR0">
BITFIELD="CLOCK_PHASE">
<PARAMETER NAME="TMRCLK" TYPE="CLOCK" SOURCE="TMR" REGISTER_NAME="DIG_Input">
BITFIELD="ClockSelect">
<PARAMETER NAME="CTRCLK1" TYPE="CLOCK" SOURCE="CNT_LSB" REGISTER_NAME="DIG_Input">
BITFIELD="ClockSelect">
<PARAMETER NAME="CTRCLKM" TYPE="CLOCK" SOURCE="CNT_MSB" REGISTER_NAME="DIG_Input">
BITFIELD="ClockSelect">
</PARAMETER_LIST>
<API_REGISTER_ALIAS_LIST>
<API_REGISTER_ALIAS NAME="A0der0" SOURCE="ADC" REGISTER_NAME="CR0"/>
<API_REGISTER_ALIAS NAME="A0der1" SOURCE="ADC" REGISTER_NAME="CR1"/>
<API_REGISTER_ALIAS NAME="A0der2" SOURCE="ADC" REGISTER_NAME="CR2"/>
<API_REGISTER_ALIAS NAME="A0der3" SOURCE="ADC" REGISTER_NAME="CR3"/>
<API_REGISTER_ALIAS NAME="CounterMSIFN" SOURCE="CNT_MSB" REGISTER_NAME="DIG_Basicfunction"/>

```

FIGURE 7D

```

<API_REGISTER_ALIAS NAME="CounterMSB1" SOURCE="CNT_MSB" REGISTER_NAME="DIG_Input"/>
<API_REGISTER_ALIAS NAME="CounterMSB2" SOURCE="CNT_MSB" REGISTER_NAME="DIG_Output"/>
<API_REGISTER_ALIAS NAME="CounterMSB0" SOURCE="CNT_MSB" REGISTER_NAME="DATA_0"/>
<API_REGISTER_ALIAS NAME="CounterMSB1" SOURCE="CNT_MSB" REGISTER_NAME="DATA_1"/>
<API_REGISTER_ALIAS NAME="CounterMSB2" SOURCE="CNT_MSB" REGISTER_NAME="DATA_2"/>
<API_REGISTER_ALIAS NAME="CounterMSB0" SOURCE="CNT_MSB" REGISTER_NAME="CONTROL_0"/>
<API_REGISTER_ALIAS NAME="CounterLSB1" SOURCE="CNT_LSB" REGISTER_NAME="DIG_BasicFunction"/>
<API_REGISTER_ALIAS NAME="CounterLSB2" SOURCE="CNT_LSB" REGISTER_NAME="DIG_Input"/>
<API_REGISTER_ALIAS NAME="CounterLSB0" SOURCE="CNT_LSB" REGISTER_NAME="DIG_Output"/>
<API_REGISTER_ALIAS NAME="CounterLSB1" SOURCE="CNT_LSB" REGISTER_NAME="DATA_0"/>
<API_REGISTER_ALIAS NAME="CounterLSB2" SOURCE="CNT_LSB" REGISTER_NAME="DATA_1"/>
<API_REGISTER_ALIAS NAME="CounterLSB0" SOURCE="CNT_LSB" REGISTER_NAME="DATA_2"/>
<API_REGISTER_ALIAS NAME="CounterSB1" SOURCE="CNT_LSB" REGISTER_NAME="CONTROL_0"/>
<API_REGISTER_ALIAS NAME="CounterSB2" SOURCE="CNT_LSB" REGISTER_NAME="DIG_BasicFunction"/>
<API_REGISTER_ALIAS NAME="CounterSB0" SOURCE="CNT_LSB" REGISTER_NAME="DIG_Input"/>
<API_REGISTER_ALIAS NAME="CounterSB1" SOURCE="CNT_LSB" REGISTER_NAME="DIG_Output"/>
<API_REGISTER_ALIAS NAME="CounterSB2" SOURCE="CNT_LSB" REGISTER_NAME="DATA_0"/>
<API_REGISTER_ALIAS NAME="CounterSB0" SOURCE="CNT_LSB" REGISTER_NAME="DATA_1"/>
<API_REGISTER_ALIAS NAME="CounterTMR1" SOURCE="TMR" REGISTER_NAME="DIG_BasicFunction"/>
<API_REGISTER_ALIAS NAME="CounterTMR2" SOURCE="TMR" REGISTER_NAME="DIG_Input"/>
<API_REGISTER_ALIAS NAME="CounterTMR0" SOURCE="TMR" REGISTER_NAME="DIG_Output"/>
<API_REGISTER_ALIAS NAME="TimerD1" SOURCE="TMR" REGISTER_NAME="DATA_0"/>
<API_REGISTER_ALIAS NAME="TimerD2" SOURCE="TMR" REGISTER_NAME="DATA_1"/>
<API_REGISTER_ALIAS NAME="TimerD0" SOURCE="TMR" REGISTER_NAME="DATA_2"/>
<API_REGISTER_ALIAS NAME="TimerC1" SOURCE="TMR" REGISTER_NAME="CONTROL_0"/>
<API_REGISTER_ALIAS NAME="TimerC2" SOURCE="TMR" REGISTER_NAME="CONTROL_1"/>
<API_REGISTER_ALIAS NAME="TimerC0" SOURCE="TMR" REGISTER_NAME="RESERVED_RESOURCE"/>
REGISTER_NAME="AnalogComparatorControl"/>
</API_REGISTER_ALIAS_LIST>
</USER_MODULE_LIST>
</PSOC_DEVICE_LIST>

```

Figure 7E